

AMENDMENTS TO THE CLAIMS:

This listing of the claims will replace all prior versions, and listings, of the claims in this application.

Claims 17-30 were previously canceled without prejudice or disclaimer.

Listing of Claims:

1. (Currently Amended) A method comprising:

sending a request for information relating to a plurality of link addresses to a link address manager of an access network-~~(AN)~~, where the request is sent by a gateway mobile terminal of a mobile network-~~(MONET)~~ that further comprises at least one mobile network node, where the gateway mobile terminal is coupled between the at least one mobile network node and an access point of the access network;

receiving, by the gateway mobile terminal, a response to the request from the link address manager; and

allocating, based on the response, individual ones of assigned the plurality of link addresses to individual ones of network nodes the at least one mobile network node of the MONET mobile network, where the allocating is performed by the gateway mobile terminal.

2. (Currently Amended) A method as in claim 58, where each network node sends a neighbor advertisement to the ~~AR~~-access router to declare the link address allocated to individual ones of the ~~network nodes~~ at least one mobile network node.

3. (Currently Amended) A method as in claim 58, where the gateway mobile terminal sends at least one neighbor advertisement to the ~~AR~~-access router to declare the link addresses allocated to individual ones of the ~~network nodes~~ at least one mobile network node.

4. (Currently Amended) A method as in claim 1, where the request is made to obtain a set of link layer addresses (~~LLAs~~) that are allocated to individual ones of the ~~network nodes~~ at least one mobile network node.

5. (Currently Amended) A method as in claim 1, where the request is made to obtain a group identification (~~Group_ID~~), where the method further comprises using an obtained ~~Group_ID~~ group identification to formulate a set of link layer addresses (~~LLAs~~) that are allocated to individual ones of the ~~network nodes~~ at least one mobile network node.

6. (Currently Amended) A method as in claim 1, where the request is made to obtain a set of link layer addresses (~~LLAs~~), where the method further comprises mapping individual ones of the ~~LLAs~~ set of link layer addresses to individual hardwired addresses of individual ones of the ~~network nodes~~ at least one mobile network node.

7. (Currently Amended) A method as in claim 1, where the request is made to obtain a set of link layer addresses (~~LLAs~~), where the method further comprises mapping individual ones of the ~~LLAs~~ set of link layer addresses to individual media access control (~~MAC~~) addresses of individual ones of the ~~network nodes~~ at least one mobile network node.

8. (Currently Amended) A method as in claim 4, where the set of ~~LLAs~~ link layer addresses are associated with a first ~~AP~~ access point, the method further comprising, in response to changing a connection of the gateway mobile terminal from the first ~~AP~~ access point to a second ~~AP~~ access point, sending a message from the gateway mobile terminal to reassociate the set of ~~LLAs~~ link layer addresses with the second ~~AP~~ access point.

9. (Currently Amended) A method as in claim 5, where the ~~Group_ID~~ group identification is associated with a first ~~AP~~ access point, the method further comprising, in response to changing a connection of the ~~Gateway~~ gateway mobile terminal from the first ~~AP~~ access point to a second ~~AP~~ access point, sending a message from the gateway mobile terminal to reassociate the

~~Group_ID-group identification~~ with the second ~~AP access point~~.

10. (Currently Amended) A method as in claim 5, where the ~~Group_ID-group identification~~ is associated with a first ~~AP access point~~, the method further comprising, in response to changing a connection of the gateway mobile terminal from the first ~~AP access point~~ to a second ~~AP access point~~, sending a message from the gateway mobile terminal to obtain another ~~Group_ID-group identification~~ that is associated with the second ~~AP access point~~.

11. (Currently Amended) A method as in claim 4, where the set of ~~LLAs-link layer addresses~~ is tracked as a group.

12. (Original) A method as in claim 1, where said gateway mobile terminal comprises a wireless device.

13. (Original) A method as in claim 1, where said gateway mobile terminal comprises a cellular telephone.

14. (Currently Amended) A method as in claim 1, where said gateway mobile terminal comprises a mobile router (~~MR~~).

15. (Original) A method as in claim 1, where said link address manager is associated with said AN.

16. (Currently Amended) A system comprising:

a mobile network (~~MONET~~) having a gateway mobile terminal and at least one mobile network node (~~MNN~~); and

an access network (~~AN~~) comprising an access point (~~AP~~), an access router (~~AR~~) and a link layer address (~~LLA~~)-manager configured to manage ~~LLAs link layer addresses~~, said ~~MONET-mobile~~

network being connectable via the gateway mobile terminal to the ~~AP~~ access point, where the gateway mobile terminal is configured, ~~in response to the gateway mobile terminal connecting to the AP~~, to send a request to the LLA-link layer address manager for information relating to a plurality of LLAs link layer addresses, to receive a response to the request and to allocate, based on the response, individual ones of the plurality of LLAs link layer addresses to individual ones of the at least one ~~MNN~~ mobile network node, where at least one of the gateway router or at least one ~~MNN~~ mobile network node is configured to perform a neighbor discovery procedure with the ~~AR~~ access router to send at least one neighbor advertisement declaring at least one allocated LLA link layer address.

17-30. (Canceled)

31. (Currently Amended) A mobile station comprising:

a transceiver configured to enable communication such that the mobile station functions as a gateway mobile terminal for being coupled between at least one ~~Mobile Network Node (MNN)~~ mobile network node and an access point (~~AP~~) of an access network (~~AN~~), where the mobile station and the at least one ~~MNN~~ mobile network node belong to a mobile network; and

a data processor configured, ~~in response to the mobile station connecting to the AP~~, to send a request for information to a link layer address (~~LLA~~) manager of the ~~AN~~ access network, wherein the information relates to a plurality of LLAs link layer addresses, and wherein the data processor is further configured, in response to receiving a response to the request from the link layer address manager, to allocate individual ones of the plurality of LLAs link layer addresses to individual ones of the ~~MNNs~~ at least one mobile network node.

32. (Currently Amended) A mobile station as in claim 31, where said data processor is operable to perform a neighbor discovery procedure with an access router (~~AR~~) of the ~~AN~~ access network to send at least one neighbor advertisement to declare an LLA-a link layer address allocated to the at least one ~~MNN~~ mobile network node.

33. (Currently Amended) A mobile station as in claim 31, where the information relating to a plurality of ~~LLAs~~link layer addresses comprises a group identification-~~(Group_ID)~~, and where said data processor is operable to use the ~~Group_ID~~group identification to formulate a set of ~~LLAs~~link layer addresses, individual ones of which are allocated to individual ones of the ~~MNNs~~ at least one mobile network node.

34. (Currently Amended) A mobile station as in claim 31, where the information relating to a plurality of ~~LLAs~~link layer addresses comprises a set of ~~LLAs~~link layer addresses individual ones of which are mapped to a hardwired address of individual ones of the ~~MNNs~~ at least one mobile network node.

35. (Currently Amended) A mobile station as in claim 31, where the information relating to a plurality of ~~LLAs~~link layer addresses comprises a set of ~~LLAs~~link layer addresses individual ones of which are mapped to a media access control (~~MAC~~) address of individual ones of the ~~MNNs~~ at least one mobile network node.

36. (Currently Amended) A mobile station as in claim 31 where the request is made to obtain a set of ~~LLAs~~link layer addresses, where the set of ~~LLAs~~link layer addresses are associated with a first-~~AP~~access point, and where said data processor further operates, in response to changing a connection of the mobile station from the first ~~AP~~access point to a second-~~AP~~access point, to send a message to reassociate the set of ~~LLAs~~link layer addresses with the second-~~AP~~access point.

37. (Currently Amended) A mobile station as in claim 33 where the ~~Group_ID~~group identification is associated with a first-~~AP~~access point, and where said data processor further operates, in response to changing a connection of the mobile station from the first ~~AP~~access point to a second-~~AP~~access point, to send a message to reassociate the ~~Group_ID~~group identification with the second-~~AP~~access point.

38. (Currently Amended) A mobile station as in claim 33 where the ~~Group_ID-group identification~~ is associated with a first-~~AP access point~~, and where said data processor further operates, in response to changing a connection of the mobile station from the first ~~AP access point~~ to a second-~~AP access point~~, to send a message to obtain another ~~Group_ID-group identification~~ that is associated with the second-~~AP access point~~.

39. (Currently Amended) A mobile station as in claim 31, where a set of ~~LLAs-link layer addresses~~ are tracked as a group.

40. (Previously Presented) A mobile station as in claim 31, where said mobile station comprises a wireless device.

41. (Original) A mobile station as in claim 31, where said mobile station comprises a cellular telephone.

42. (Currently Amended) A mobile station as in claim 31, where said mobile station comprises a mobile router-~~(MR)~~.

43. (Currently Amended) A ~~computer-readable-medium-program storage device~~ storing a program of instructions executable by a data processor of a mobile station for performing operations, the operations comprising:

sending a request for information relating to a plurality of link addresses to a link address manager of an access network-~~(AN)~~, where the mobile station comprises a gateway mobile terminal of a mobile network-~~(MONET)~~ that further comprises at least one mobile network node, where the gateway mobile terminal is coupled between the at least one mobile network node and an access point of the access network;

receiving a response to the request from the link address manager; and

allocating, based on the response, individual ones of ~~assigned the plurality of~~ link addresses to individual ones of ~~network nodes~~ the at least one mobile network node of the MONET mobile network.

44. (Currently Amended) A ~~computer-readable-medium-program storage device~~ as in claim 43, the operations further comprising: performing a neighbor discovery procedure with an access router (~~AR~~) of the ~~AN-access network~~ to send at least one neighbor advertisement declaring the allocated individual ones of the assigned link addresses

45. (Currently Amended) A ~~computer-readable-medium-program storage device~~ as in claim 44, where each mobile network node sends a neighbor advertisement to the ~~AR-access router~~ to declare the link address allocated to the mobile network node.

46. (Currently Amended) A ~~computer-readable-medium-program storage device~~ as in claim 43, where the request is made to obtain a set of link layer addresses (~~LLAs~~) that are allocated to individual ones of the ~~network nodes~~ at least one mobile network node.

47. (Currently Amended) A ~~computer-readable-medium-program storage device~~ as in claim 46, where the set of ~~LLAs-link layer addresses~~ are associated with a first-AP access point, the operations further comprising, in response to changing a connection of the gateway mobile terminal from the first AP-access point to a second-AP access point, sending a message from the gateway mobile terminal to reassociate the set of ~~LLAs-link layer addresses~~ with the second-AP access point.

48. (Currently Amended) A ~~computer-readable-medium-program storage device~~ as in claim 46, where the set of ~~LLAs-link layer addresses~~ is tracked as a group.

49. (Currently Amended) A ~~computer-readable-medium-program storage device~~ as in claim 43, where the request is made to obtain a group identification-~~(Group_ID)~~, where the operations further comprise using an obtained Group_ID-group identification to formulate a set of link layer

addresses (~~LLAs~~) that are allocated to individual ones of the ~~network nodes~~ at least one mobile network node.

50. (Currently Amended) A ~~computer-readable-medium-program storage device~~ as in claim 49, where the ~~Group_ID-group identification~~ is associated with a first-~~AP access point~~, the operations further comprising, in response to changing a connection of the Gateway mobile terminal from the first ~~AP-access point~~ to a second-~~AP access point~~, sending a message from the gateway mobile terminal to reassociate the ~~Group_ID-group identification~~ with the second-~~AP access point~~.

51. (Currently Amended) A ~~computer-readable-medium-program storage device~~ as in claim 49, where the ~~Group_ID-group identification~~ is associated with a first-~~AP access point~~, the operations further comprising, in response to changing a connection of the gateway mobile terminal from the first ~~AP-access point~~ to a second-~~AP access point~~, sending a message from the gateway mobile terminal to obtain another ~~Group_ID-group identification~~ that is associated with the second-~~AP access point~~.

52. (Currently Amended) A ~~computer-readable-medium-program storage device~~ as in claim 43, where the request is made to obtain a set of link layer addresses (~~LLAs~~), where the operations further comprise mapping individual ones of the ~~LLAs-link layer addresses~~ to individual hardwired addresses of individual ones of the ~~network nodes~~ at least one mobile network node.

53. (Currently Amended) A ~~computer-readable-medium-program storage device~~ as in claim 43, where the request is made to obtain a set of link layer addresses (~~LLAs~~), where the operations further comprise mapping individual ones of the ~~LLAs-link layer addresses~~ to individual media access control (~~MAC~~)-addresses of individual ones of the ~~network nodes~~ at least one mobile network node.

54. (Currently Amended) A ~~computer-readable-medium-program storage device~~ as in claim 43, where said ~~gateway mobile terminal~~ mobile station comprises a wireless device.

55. (Currently Amended) A ~~computer-readable medium~~ program storage device as in claim 43, where said ~~gateway mobile terminal~~ mobile station comprises a cellular telephone.

56. (Currently Amended) A ~~computer-readable medium~~ program storage device as in claim 43, where said gateway mobile terminal comprises a mobile router ~~(MR)~~.

57. (Currently Amended) A ~~computer-readable medium~~ program storage device as in claim 43, where said link address manager is associated with said ~~AN~~ access network.

58. (Currently Amended) A method as in claim 1, further comprising: performing a neighbor discovery procedure with an access router ~~(AR)~~ of the ~~AN~~ access network to send at least one neighbor advertisement declaring the allocated individual ones of the assigned link addresses.

59. (Currently Amended) A system as in claim 16, where at least one of the gateway router and the ~~MNNs~~ at least one mobile network node is configured to perform a neighbor discovery procedure with the ~~AR~~ access router to send at least one neighbor advertisement declaring at least one allocated ~~LLA~~ link layer address.